

## SEQUENCE LISTING

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 The Government of the United States of America  
 as represented by The Secretary of the  
 Department of Health and Human Services

<120> Anti-CD30 Stalk and Anti-CD30 Antibodies Suitable for  
 Use in Immunotoxins

<130> 015280-464100PC

<140> WO PCT/US03/18373  
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<150> US 60/387,293  
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<160> 41

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<210> 2  
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 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
 monoclonal antibody (MAb) T6

<400> 2  
 Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Thr Pro Ser Gln  
 1 5 10 15  
 Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Lys Tyr  
 20 25 30  
 Ser Ile His Trp Val Arg Gln Pro Pro Gly Arg Gly Leu Glu Trp Leu  
 35 40 45  
 Gly Met Ile Trp Gly Val Glu Asn Thr Asp Tyr Asn Ser Ala Leu Lys  
 50 55 60

Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu  
 65 70 75 80

Lys Met Asn Ser Leu Gln Ser Asp Asp Thr Ala Met Tyr Tyr Cys Ala  
 85 90 95

Arg Lys Asp Leu Gly Leu Tyr Gly Met Asn Tyr Trp Gly Gln Gly Ile  
 100 105 110

Ser Val Thr Val Ser Ala  
 115

<210> 3.  
 <211> 120  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
 monoclonal antibody (MAB) T7

<400> 3  
 Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ser  
 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Ser Tyr  
 20 25 30

Trp Met Asn Trp Met Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
 35 40 45

Gly Gln Ile Tyr Pro Gly Asp Asp Asp Thr Asn Tyr Asn Gly Lys Phe  
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr  
 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys  
 85 90 95

Ala Arg Arg Glu Thr Gly Arg Gly Ala Trp Phe Thr Tyr Trp Gly Gln  
 100 105 110

Gly Thr Leu Val Thr Val Ser Ala  
 115 120

<210> 4  
 <211> 120  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
 monoclonal antibody (MAB) T13

<400> 4  
 Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Lys Pro Gly Ala  
 1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Thr Tyr  
                   20                  25                  30  
 Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
                   35                  40                  45  
 Gly Tyr Ile Asn Pro Ser Thr Gly Tyr Thr Asp Tyr Asn Glu Lys Phe  
                   50                  55                  60  
 Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr  
                   65                  70                  75                  80  
 Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
                   85                  90                  95  
 Val Arg Arg Gly Ser Tyr Asp Gly Asn Pro Phe Ala Tyr Trp Gly Gln  
                   100                  105                  110  
 Gly Thr Leu Val Ser Val Ser Ala  
                   115                  120

<210> 5  
 <211> 117  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
           monoclonal antibody (MAb) T14

<400> 5  
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly  
           1                  5                  10                  15  
 Ser Leu Lys Leu Ser Cys Gly Val Ser Gly Phe Thr Phe Ser Asp Tyr  
                   20                  25                  30  
 Tyr Met Tyr Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val  
                   35                  40                  45  
 Ala Ser Ile Ser Ser Gly Gly Ser Tyr Thr Tyr Tyr Ser Asp Ser Val  
                   50                  55                  60  
 Lys Gly Arg Leu Thr Ile Ser Arg Asp Asn Thr Lys Asn Asn Leu Tyr  
                   65                  70                  75                  80  
 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Val Tyr Tyr Cys  
                   85                  90                  95  
 Val Arg Gly Pro Gly Gly Val Leu Asp Tyr Trp Gly Gln Gly Thr Thr  
                   100                  105                  110  
 Leu Thr Val Ser Ser  
                   115

<210> 6  
 <211> 119  
 <212> PRT  
 <213> Mus musculus

<220>

<223> heavy chain variable region (VH) of anti-CD30  
monoclonal antibody (MAb) T24

<400> 6

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala  
1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Ser Phe Thr Ser Tyr  
20 25 30

Trp Ile Asp Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
35 40 45

Gly Asn Ile Tyr Pro Ser Asn Ala Tyr Thr Asn Tyr Asn Gln Lys Phe  
50 55 60

Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr  
65 70 75 80

Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
85 90 95

Thr Ser Val Leu Asp Tyr Phe Tyr Ala Met Asp Tyr Trp Gly Gln Gly  
100 105 110

Thr Ser Val Thr Val Ser Ser  
115

<210> 7

<211> 118

<212> PRT

<213> Mus musculus

<220>

<223> heavy chain variable region (VH) of anti-CD30  
monoclonal antibody (MAb) T25

<400> 7

Gln Val Thr Leu Lys Glu Ser Gly Pro Gly Ile Leu Gln Pro Ser Gln  
1 5 10 15

Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Asn Thr Ser  
20 25 30

Gly Val Gly Val Gly Trp Ile Arg Gln Pro Ser Gly Lys Gly Leu Glu  
35 40 45

Trp Leu Ala His Ile Trp Trp Asp Asp Asp Glu Arg Tyr Asn Pro Val  
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Ser Asn Gln Val  
65 70 75 80

Phe Leu Lys Ile Ala Asn Val Asp Thr Ala Asp Ser Ala Thr Tyr Tyr  
85 90 95

Cys Val Arg Ser Met Val Ala Trp Phe Pro Tyr Trp Gly Arg Gln Thr  
 100 105 110

Leu Val Thr Val Ser Ala  
 115

<210> 8  
 <211> 125  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
 monoclonal antibody (MAB) control HeFi-I

<400> 8  
 Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
 1 5 10 15  
 Ser Leu Arg Leu Ser Cys Ala Thr Ser Gly Phe Thr Phe Ser Asp Tyr  
 20 25 30  
 Tyr Met Asn Trp Val Arg Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu  
 35 40 45  
 Gly Phe Ile Arg Asn Lys Ala Asn Gly Tyr Thr Thr Glu Phe Ser Ala  
 50 55 60  
 Ser Val Met Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser Ile  
 65 70 75 80  
 Leu Tyr Leu Gln Met Asn Thr Leu Arg Ala Glu Asp Ser Ala Thr Tyr  
 85 90 95  
 Tyr Cys Ala Arg Asp Pro Pro Tyr Gly Asn Pro His Tyr Tyr Ala Met  
 100 105 110  
 Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser  
 115 120 125

<210> 9  
 <211> 121  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
 monoclonal antibody (MAB) CL2

<400> 9  
 Glu Val Gln Leu Lys Gln Ser Gly Thr Glu Leu Val Lys Pro Gly Ala  
 1 5 10 15  
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr  
 20 25 30  
 Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
 35 40 45

Gly Asn Ile Asn Pro Ser Asn Gly Gly Thr Asn Tyr Asn Glu Lys Phe  
 50 55 60  
 Lys Ser Lys Ala Thr Leu Thr Ile Asp Lys Ser Ser Ser Thr Ala Tyr  
 65 70 75 80  
 Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Arg Arg Thr Glu Thr Ala Gln Ala Ser Pro Phe Ala Tyr Trp Gly  
 100 105 110  
 Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120

<210> 10  
 <211> 120  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
 monoclonal antibody (MAB) Ki-4

<400> 10  
 Gln Val Lys Leu Gln Glu Ser Gly Thr Glu Leu Ala Lys Pro Gly Ala  
 1 5 10 15  
 Ala Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr  
 20 25 30  
 Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
 35 40 45  
 Gly Tyr Ile Asn Pro Asn Thr Ala Tyr Thr Asp Tyr Asn Gln Lys Phe  
 50 55 60  
 Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr  
 65 70 75 80  
 Met Gln Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Lys Lys Thr Thr Gln Thr Thr Trp Gly Phe Pro Phe Trp Gly Gln  
 100 105 110  
 Gly Thr Leu Val Thr Val Ser Ser  
 115 120

<210> 11  
 <211> 120  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VH) of anti-CD30  
 monoclonal antibody (MAB) T420

<400> 11

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Lys Pro Gly Ala  
1 5 10 15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr  
20 25 30

Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Asp Leu Glu Trp Ile  
35 40 45

Gly Tyr Ile Asn Pro Ser Thr Asp Tyr Thr Asp Tyr Asn Gln Lys Phe  
50 55 60

Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr  
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
85 90 95

Ala Thr Arg His Tyr Gly Ser Ser Tyr Gly Phe Ala Tyr Trp Gly Gln  
100 105 110

Gly Thr Leu Val Thr Val Ser Ala  
115 120

<210> 12

<211> 119

<212> PRT

<213> Mus musculus

<220>

<223> heavy chain variable region (VH) of anti-CD30  
monoclonal antibody (MAB) T427

<400> 12

Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala  
1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Phe Ser Phe Thr Ser Tyr  
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
35 40 45

Gly Met Ile His Pro Ser Asp Ser Glu Thr Arg Leu Asn Gln Lys Phe  
50 55 60

Lys Asp Arg Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr  
65 70 75 80

Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
85 90 95

Ala Ser Glu Met Asp Tyr Tyr Phe Ala Met Asp Tyr Trp Gly Gln Gly  
100 105 110

Thr Ser Val Thr Val Ser Ser  
115

<210> 13  
<211> 112  
<212> PRT  
<213> Mus musculus

<220>  
<223> heavy chain variable region (VH) of anti-CD30  
monoclonal antibody (MAB) T405

<400> 13  
Gln Val Gln Leu Gln Gln Ile Gly Ala Glu Leu Val Arg Pro Gly Ala  
1 5 10 15  
Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Asn Asn Tyr  
20 25 30  
Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
35 40 45  
Gly Asn Ile Tyr Pro Ser Asp Ser Arg Ser Asn Tyr Asn Gln Lys Phe  
50 55 60  
Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Pro Ser Ser Thr Ala Tyr  
65 70 75 80  
Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
85 90 95  
Thr Leu Gly Ser Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala  
100 105 110

<210> 14  
<211> 121  
<212> PRT  
<213> Mus musculus

<220>  
<223> heavy chain variable region (VH) of anti-CD30  
monoclonal antibody (MAB) T105

<400> 14  
Gln Val Thr Leu Lys Glu Ser Gly Pro Gly Ile Leu Gln Pro Ser Gln  
1 5 10 15  
Thr Leu Ser Leu Thr Cys Ser Phe Ser Gly Phe Ser Leu Ser Thr Ser  
20 25 30  
Gly Met Gly Val Ser Trp Ile Arg Gln Pro Ser Gly Lys Asp Leu Glu  
35 40 45  
Trp Leu Ala His Ile Tyr Trp Asp Asp Asp Lys Arg Tyr Asn Pro Ser  
50 55 60  
Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Ser Asn Gln Val  
65 70 75 80



Phe Leu Lys Ile Thr Ser Val Asp Thr Ala Asp Thr Ala Thr Tyr  
85 90 95

Cys Ala Arg Arg Ala Asp Gly Leu Tyr Phe Tyr Leu Asp Val Trp Gly  
100 105 110

Ala Gly Thr Thr Val Thr Val Ser Ser  
115 120

<210> 15

<211> 109

<212> PRT

<213> Mus musculus

<220>

<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) T6

<400> 15

Asp Ile Val Met Thr Gln Ser Gln Lys Phe Met Ser Thr Ser Val Gly  
1 5 10 15

Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Gly Thr Asn  
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Phe  
35 40 45

Tyr Ser Ala Ser Tyr Arg Tyr Ser Gly Val Pro Asp Arg Phe Ile Gly  
50 55 60

Ser Gly Ser Gly Thr Val Phe Thr Leu Thr Ile Ser Asn Val Gln Ser  
65 70 75 80

Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Asn Thr Tyr Pro Leu  
85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Glu Arg Ala  
100 105

<210> 16

<211> 114

<212> PRT

<213> Mus musculus

<220>

<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) T7

<400> 16

Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly  
1 5 10 15

Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Leu Glu Tyr Tyr  
20 25 30

Gly Thr Thr Leu Met Gln Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro  
35 40 45

Lys Leu Leu Ile Tyr Ala Ala Ser Asn Val Glu Ser Gly Val P Ala  
 50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu Asn Ile His  
 65 70 75 80

Pro Val Glu Glu Asp Asp Ile Ala Met Tyr Phe Cys His Gln Ser Arg  
 85 90 95

Lys Val Pro Ser Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg  
 100 105 110

Ala Asp

<210> 17

<211> 109

<212> PRT

<213> Mus musculus

<220>

<223> light chain variable region (VL) of anti-CD30  
 monoclonal antibody (MAb) T13

<400> 17

Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly  
 1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala  
 20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly His Ser Pro Lys Leu Leu Ile  
 35 40 45

Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Thr Gly  
 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile Ser Ser Val Gln Val  
 65 70 75 80

Glu Asp Leu Ala Leu Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Phe  
 85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg Ala  
 100 105

<210> 18

<211> 115

<212> PRT

<213> Mus musculus

<220>

<223> light chain variable region (VL) of anti-CD30  
 monoclonal antibody (MAb) T14-A

<400> 18

Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly  
 1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Asn Leu Ile His Ser  
           20                          25                          30  
 Asn Gly Asn Ala Tyr Leu Gln Trp Tyr Leu Gln Lys Pro Gly Gln Ser  
           35                          40                          45  
 Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro  
           50                          55                          60  
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ala Leu Lys Ile  
           65                          70                          75                          80  
 Ile Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Thr  
                           85                          90                          95  
 Thr His Val Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys  
                   100                          105                          110  
 Arg Ala Asp  
           115

<210> 19  
 <211> 114  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> light chain variable region (VL) of anti-CD30  
           monoclonal antibody (MAb) T14-B

<400> 19  
 Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly  
   1                          5                          10                          15  
 Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Leu Glu Tyr Tyr  
           20                          25                          30  
 Gly Thr Thr Leu Met Gln Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro  
           35                          40                          45  
 Lys Leu Leu Ile Tyr Ala Ala Ser Asn Val Glu Ser Gly Val Pro Ala  
           50                          55                          60  
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu Asn Ile His  
           65                          70                          75                          80  
 Pro Val Glu Glu Asp Asp Ile Ala Met Tyr Phe Cys His Gln Ser Arg  
                   85                          90                          95  
 Lys Val Pro Ser Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg  
           100                          105                          110  
 Ala Asp

<210> 20  
 <211> 109  
 <212> PRT  
 <213> Mus musculus

<220>

<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) T21

<400> 20

Asp Ile Gln Met Asn Gln Ser Pro Ser Ser Leu Ser Ala Ser Leu Gly  
1 5 10 15

Asp Thr Ile Thr Ile Thr Cys His Ala Ser Gln Asn Ile Asn Val Trp  
20 25 30

Leu Thr Trp Tyr Gln Gln Lys Pro Gly Asn Ile Pro Gln Leu Leu Ile  
35 40 45

Tyr Lys Ala Ser Asn Leu His Thr Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Gly Ser Gly Thr Gly Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro  
65 70 75 80

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Gly Gln Ser Tyr Pro Leu  
85 90 95

Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Ala  
100 105

<210> 21

<211> 109

<212> PRT

<213> Mus musculus

<220>

<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) T24

<400> 21

Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly  
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr  
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile  
35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly  
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln  
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Val Asn Thr Leu Pro Arg  
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala  
100 105

<210> 22  
<211> 116  
<212> PRT  
<213> Mus musculus

<220>  
<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) T25

<400> 22  
Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Val Gly  
1 5 10 15  
Glu Lys Phe Thr Val Asn Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser  
20 25 30  
Ser Asn Gln Lys Asn Phe Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln  
35 40 45  
Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val  
50 55 60  
Pro Asp Arg Phe Ile Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr  
65 70 75 80  
Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln  
85 90 95  
His Tyr Arg Tyr Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile  
100 105 110  
Lys Arg Ala Arg  
115

<210> 23  
<211> 113  
<212> PRT  
<213> Mus musculus

<220>  
<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) control HeFi-I

<400> 23  
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly  
1 5 10 15  
Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Lys Ser Val Ser Ala Ser  
20 25 30  
Gly Tyr Asn Tyr Met His Trp Tyr Gln Gln Lys Ala Gly Gln Pro Pro  
35 40 45  
Lys Leu Leu Ile His Leu Ala Ser Asn Leu Glu Ser Gly Val Pro Ala  
50 55 60  
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His  
65 70 75 80

Pro Val Glu Glu Glu Asp Ala Ser Thr Tyr Tyr Cys Gln His Ser Gly  
85 90 95

Glu Leu Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg  
100 105 110

Ala

<210> 24  
<211> 107  
<212> PRT  
<213> Mus musculus

<220>  
<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) CL2

<400> 24  
Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly  
1 5 10 15

Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Gly Thr Asn  
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile  
35 40 45

Tyr Ser Ala Ser Thr Arg Tyr Ser Gly Val Pro Asp Arg Phe Thr Gly  
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser  
65 70 75 80

Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Phe  
85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys  
100 105

<210> 25  
<211> 107  
<212> PRT  
<213> Mus musculus

<220>  
<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) Ki-4

<400> 25  
Asp Ile Val Leu Thr Gln Ser His Lys Ser Met Ala Met Ser Val Gly  
1 5 10 15

Glu Arg Val Thr Leu Ser Cys Lys Ala Ser Glu Asn Val Asp Ser Phe  
20 25 30

Val Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile  
35 40 45

Tyr Gly Ala Ser Asn Arg His Ser Gly Val Pro Asp Arg Phe Ala Tyr  
 50 55 60

Ser Gly Ser Gly Arg Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala  
 65 70 75 80

Glu Asp Leu Ala Asp Tyr His Cys Gln Gln Asn Tyr Arg Tyr Pro Leu  
 85 90 95

Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys  
 100 105

<210> 26  
 <211> 108  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> light chain variable region (VL) of anti-CD30  
 monoclonal antibody (MAb) T420

<400> 26  
 Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Gly  
 1 5 10 15

Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asp Val Ser Thr Ala  
 20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile  
 35 40 45

Tyr Trp Ala Ser Thr Arg His Thr Gly Val Pro Asp Arg Phe Thr Gly  
 50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Ser Val Gln Ala  
 65 70 75 80

Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln His Tyr Arg Thr Pro Phe  
 85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg  
 100 105

<210> 27  
 <211> 112  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> light chain variable region (VL) of anti-CD30  
 monoclonal antibody (MAb) T427

<400> 27  
 Asp Ile Val Leu Thr Gln Ser Pro Thr Ser Leu Ala Val Ser Leu Gly  
 1 5 10 15

Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Asp Ser Tyr  
 20 25 30

Gly Asn Ser Phe Met His Trp Phe Gln Gln Lys Pro Gly Gln Phe Pro  
 35 40 45  
 Lys Leu Leu Ile Tyr Arg Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala  
 50 55 60  
 Arg Phe Ser Gly Ser Gly Ser Trp Thr Asp Phe Thr Leu Thr Ile Asn  
 65 70 75 80  
 Pro Val Glu Ala Asp Asp Val Ala Thr Tyr Tyr Cys Gln Gln Ser Asn  
 85 90 95  
 Glu Asp Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg  
 100 105 110

<210> 28  
 <211> 113  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> light chain variable region (VL) of anti-CD30  
 monoclonal antibody (MAb) T405

<400> 28  
 Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly  
 1 5 10 15  
 Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Ser Asp Ser  
 20 25 30  
 Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser  
 35 40 45  
 Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro  
 50 55 60  
 Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile  
 65 70 75 80  
 Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly  
 85 90 95  
 Ala His Phe Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys  
 100 105 110

Arg

<210> 29  
 <211> 108  
 <212> PRT  
 <213> Mus musculus



<220>

<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAB) T105

<400> 29

Asp Ile Val Met Thr Gln Ser Gln Lys Phe Met Ser Thr Ser Val Gly  
1 5 10 15

Asp Arg Val Ser Val Thr Cys Lys Ala Ser Gln Asn Val Asn Thr Asn  
20 25 30

Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Glu Ala Leu Ile  
35 40 45

Tyr Ser Ala Ser Tyr Arg Tyr Ser Gly Val Pro Asp Arg Phe Thr Gly  
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser  
65 70 75 80

Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Asn Ser Tyr Pro Leu  
85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg  
100 105

<210> 30

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Pseudomonas  
exotoxin (PE) carboxyl terminus addition

<400> 30

Lys Asp Glu Leu  
1

<210> 31

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Pseudomonas  
exotoxin (PE) carboxyl terminus addition

<400> 31

Arg Glu Asp Leu  
1

<210> 32

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:kappa Ig  
 subclass-specific 3' end primer

<400> 32  
 gactgaggca cctccagatg ttaa 24

<210> 33  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:gamma1 Ig  
 subclass-specific 3' end primer

<400> 33  
 cagggtcacc atggagttag ttg 24

<210> 34  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:gamma2b Ig  
 subclass-specific 3' end primer

<400> 34  
 tccagagttc caagtcacag tcac 24

<210> 35  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:kappa 5' end  
 primer

<400> 35  
 ggatggtggg aagatggata cagttggtgc agc 33

<210> 36  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:gamma1 5' end  
 primer

<400> 36  
 aggggccagt ggatagacag atgggggtgt 30

<210> 37  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:gamma2b 5' end  
primer

<400> 37  
aggggccagt ggatagactg atgggggtgt

30

<210> 38  
<211> 117  
<212> PRT  
<213> Mus musculus

<220>  
<223> heavy chain variable region (VH) of anti-CD30  
monoclonal antibody (MAb) T201

<400> 38  
Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala Pro Ser Gln  
1 5 10 15  
Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu Ile Asp Tyr  
20 25 30  
Gly Val Ser Trp Val Arg Gln Pro Pro Gly Lys Gly Leu Glu Trp Leu  
35 40 45  
Gly Met Ile Trp Gly Asp Gly Asn Thr Asp Tyr Asn Ser Gly Leu Lys  
50 55 60  
Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln Val Phe Leu  
65 70 75 80  
Lys Val Asn Ser Leu Gln Thr Asp Asp Thr Ala Arg Tyr Tyr Cys Ala  
85 90 95  
Arg Pro Ser Thr Gly Thr Leu Phe Ala Tyr Trp Gly Gln Gly Thr Leu  
100 105 110  
Val Thr Val Ser Ala  
115

<210> 39  
<211> 110  
<212> PRT  
<213> Mus musculus

<220>  
<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAb) T201

<400> 39  
Glu Ile Val Leu Thr Gln Ser Pro Thr Thr Met Ala Ala Ser Pro Gly  
1 5 10 15

Glu Arg Ile Thr Phe Thr Cys Ser Ala Ser Ser Gly Ile Ser Ser Leu  
                   20                                  25                                  30  
 Tyr Leu His Trp Tyr Gln Gln Lys Pro Gly Phe Ser Pro Lys Leu Leu  
                   35                                  40                                  45  
 Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro Pro Arg Phe Ser  
                   50                                  55                                  60  
 Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Gly Thr Met Glu  
                   65                                  70                                  75                                  80  
 Ala Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Ser Ile Pro  
                                   85                                  90                                  95  
 Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Ala  
                   100                                  105                                  110

<210> 40  
 <211> 112  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> heavy chain variable region (VL) of anti-CD30  
           monoclonal antibody (MAB) T408

<400> 40  
 Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Arg Pro Gly Ala  
           1                                  5                                  10                                  15  
 Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr  
                   20                                  25                                  30  
 Trp Ile Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile  
                   35                                  40                                  45  
 Gly Asn Ile Tyr Pro Ser Asp Ser Tyr Ser Asn Tyr Asn Gln Lys Phe  
                   50                                  55                                  60  
 Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr  
                   65                                  70                                  75                                  80  
 Met Gln Leu Ser Ser Pro Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
                                   85                                  90                                  95  
 Thr Leu Gly Ser Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala  
                   100                                  105                                  110

<210> 41  
 <211> 114  
 <212> PRT  
 <213> Mus musculus

<220>

<223> light chain variable region (VL) of anti-CD30  
monoclonal antibody (MAb) T408

<400> 41

Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile Gly  
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Ser Asp Ser  
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly Gln Ser  
35 40 45

Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly Val Pro  
50 55 60

Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile  
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp Gln Gly  
85 90 95

Ala His Phe Pro Arg Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys  
100 105 110

Arg Ala